

Defense Travel System

Infrastructure Self Assessment Guide



Version 3.0

This document is controlled by the PROGRAM MANAGEMENT OFFICE-DEFENSE TRAVEL SYSTEM. A printed copy of this document is an uncontrolled copy.

Document Approval Page

The following organizations have approved this document as evidenced by signature and date contained herein.*

Signature _____
Col Larry J. Schaefer, Program Director, PMO-DTS

Date: _____

***Note: Original signatures are on file at the PMO-DTS.**

Document History

Control ID	Date	Version	Author	Description of Activity
PMO-GDE-FLD-060702-1.0	07 June 02	Preliminary	J. Warner	Original Draft
PMO-GDE-FLD-060702-1.0	10 June 02	Final	PMO-DTS CM	Final formatting and clean-up of QA findings.
PMO-GDE-FLD-060702-1.1	11 July 02	Revision, 1.1	J. Warner	Changed the title of this document from Site Guidance Package to IT Infrastructure Self-Assessment Guide and also references within the document from old name to new name.
PMO-GDE-FLD-060702-2.0	19 Feb 03	Version 2.0	J. Caton	Updated the document to reflect the change in architecture from DTS Adams to DTS Jefferson.
PMO-GDE-FLD-060702-3.0	1 May 03	Version 3.0	J. Caton	Updated the document to reflect the use of the new ISA website.

NOTE: you may record the reviewers (as distinct from the approvers) with the description of activity above or in the emails or meeting minutes archived with the document as separate files.

TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	DOCUMENT DESCRIPTION.....	1
1.2	DOCUMENT PURPOSE	1
2	DTS SPEEDOMETER WEB PAGE	2
2.1	DESCRIPTION	2
2.2	ESTIMATING A SITE’S CAPACITY FOR CONCURRENT DTS USERS.....	3
2.3	ESTIMATING A SITE’S NEED FOR CONCURRENT DTS USERS	3
2.4	COMPARING BOTH	4

1 INTRODUCTION

1.1 Document Description

The information in this document is written for use with:

- the Defense Travel System (DTS), Jefferson Release
- the DTS Speedometer web page, located at <http://www.defensetravel.osd.mil/dts/site/speedTest.jsp>

1.2 Document Purpose

This document, used in conjunction with the DTS Speedometer web page, provides the reader with the ability to estimate their site's capacity for concurrent DTS users. This document also provides an example of how to estimate a site's need for concurrent DTS users, which can then be compared against the estimated capacity.

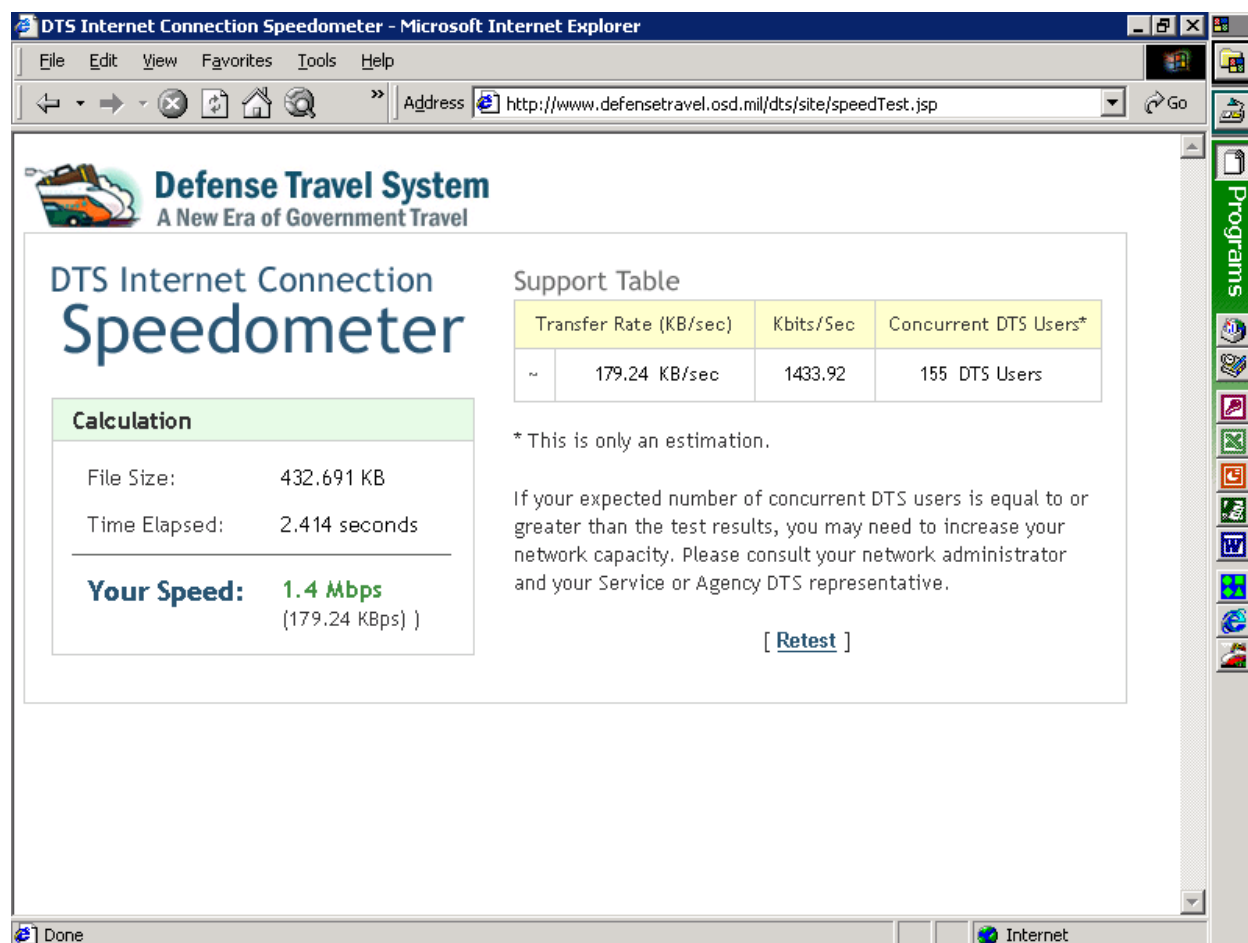
For the purposes of this document, it is assumed that the reader (i.e., user) is a person located at the installation where the test is conducted. The reader should be intimately familiar with the site, and should use their situational awareness to make sure the calculations reflect the true status of DTS at the site.

This document and the DTS Speedometer web page replace earlier versions of this document, which contained a site survey and manual methods of calculating capacity for concurrent usage.

2 DTS SPEEDOMETER WEB PAGE

2.1 Description

The DTS Speedometer web page (<http://www.defensetravel.osd.mil/dts/site/speedTest.jsp>) establishes a live connection between the user and the DTS Central Data Center (CDC), where DTS transactions are stored and processed. This web page simulates a typical DTS transaction by sending a packet of information roughly the size of a typical DTS transaction, and then measures its performance on the site's network. The web page can then estimate the site's capacity for concurrent DTS users from that particular location.



The DTS Speedometer displays two tables. The chart on the left side calculates the 'speed' of the system for a typical DTS user. The two components of this calculation are the 'size' (in kilobytes) of a typical DTS (Jefferson version) transaction, and the time that it takes for the data in that transaction to travel from the site to the CDC and back again.

The 'Support Table' on the right side of the screen displays an estimate of the *capacity* for concurrent users. This estimate is derived using algorithms commonly used by information technology specialists.

Please note that concurrent usage is not equivalent to total usage. A site may have a total of 20,000 users, but may never experience more than 50 concurrent users. That is, the site may never have more than 50 persons connecting to the CDC at any one point in time.

2.2 Estimating a Site's Capacity for Concurrent DTS Users

To use the DTS Speedometer, the users should access the website from the installation. The web page will establish a connection from the user's computer to the Central Data Center (CDC) located in Fairfax, Virginia and simulates a DTS transaction. The web page will display the results of the connectivity test, and display an estimate of the *capacity* for concurrent users at the site from that specific location.

The results of the connectivity test represent the network's capacity for concurrent DTS users at that particular moment in time, and from that particular physical location on the site's network. Results will vary by time of day (because network usage varies by time of day), by the user's location on the network (due to the architecture or condition of the local area network), and by conditions on the Internet and NIPRNET, among other things. For example, the results of the test can vary as users send and receive email messages with large attachments, or as they listen to online radio stations, etc.

To get an accurate picture of the site's network, the user should conduct this test several times, at different times of the day, from different locations on the installation. The site's network administrators should be able to identify the local area networks (LANs) present on the installation, and thus the particular locations where the user will need to conduct this test.

The user should record the results of the many tests, and note that the network capacity is lowest when usage is highest.

2.3 Estimating a Site's Need for Concurrent DTS Users

The DTS Speedometer provides the user with one number that indicates the site's ability to support the Defense Travel System: the estimated *capacity* for concurrent DTS users.

The site should then calculate the estimated *need* for concurrent users, and compare it to their estimated *capacity* for concurrent users.

The site can estimate their need for concurrent users using the following example:

Estimating a Site's Need for Concurrent DTS Users	
	Estimate
Annual voucher count	30,000
Annual work days	260
Average hours worked per day	8
Annual hours worked	2,080
Vouchers processed per hour	14.42
Estimated need for concurrent DTS users	14.42

In the above example, a site submits 30,000 travel vouchers per year. This site typically works 260 days a year (52 weeks X 5 days a week), and a typical work day is 8 hours long. The total estimated annual hours worked is 2,080 (260 days X 8 hours a day).

Thus, a site that processes 30,000 vouchers per year, and works on average 2,080 hours a year, will process an average of 14.42 vouchers per working hour. We can then conclude that this site will experience, on average, 14 or 15 concurrent users at any point in time during the work day.

This conclusion is based on historical data collected from the CDC that shows that the time to process a travel request in DTS from end-to-end is about one hour. In other words, the typical transaction in DTS requires, on average, one hour on the system to:

- Create and route the travel request,
- Approve the request,
- Create and route the voucher,
- Certify the voucher and submit for payment.

This estimate accounts only for the time that users are ‘logged on’ to DTS; this estimate does not include the time that documents are waiting for action (i.e., review, approval, certification).

There are several things to consider when calculating the need for concurrent DTS users at an installation. The results of the calculations in the chart are based on averages. An installation may experience varying levels of usage, depending on the time of year, deployment status, characteristic of the typical DTS transaction, etc.

For example, an installation may conduct yearly exercises that will affect the level of DTS activity at the site. The user of this document should be aware of situational conditions, and should account for this in any DTS usage estimates. The user may, for example, select the time of the year when most of the site’s travel is conducted. The calculations in the chart could be modified to account for a different time period (instead of using annual numbers, the site could use quarterly numbers from the busiest quarter).

A site may also be atypical if it is a transit point for personnel. In this case, DTS usage may be constant across a 24-hour work period, rather than the typical 8 hour work day. In our example, the estimated *need* for concurrent DTS users would then drop to 4.81 from 14.42.

These are just two examples of how situational factors may require the user of this document to modify the calculations provided earlier. It is the users responsibility to account for factors that may affect DTS usage at their location, and to incorporate them into the calculations.

2.4 Comparing Both

Once the user has estimated their site’s *need* for concurrent DTS users, the user can compare that information with the results of the DTS Speedometer, which provides an estimate of the *capacity* for concurrent DTS users.

For comparison purposes, the user should compare the network’s capacity at the busiest time of the day (i.e., the lowest estimated network capacity) with the average estimated need for

concurrent users. Using both numbers, the user can then judge whether or not the network is capable of supporting the DTS user-base at the site.